

Claims 1-16 are pending in the application. Claims 1-4, 6-8, 10, 14 and 16 have been canceled and claims 5, 9 and 13 have been amended to include the limitations of claims 6, 10 and 14, respectively.

AMENDMENTS TO SPECIFICATION

Applicants have discovered a typographical error on page 3 and have corrected it in this amendment.

CLAIM REJECTION - 35 USC § 112, SECOND PARAGRAPH

Claims 1-10 and 13-16 have been rejected under 35 USC § 112, second paragraph, as being indefinite. Claims 1-4, 6-8, 10, 14 and 16 have been canceled. Regarding claims 6 and 10, the Examiner asked what an "axis of symmetry" is and to what the term "the horizontal" referred. Applicant refers the Examiner to the McGraw-Hill Dictionary of Scientific and Technical Terms, 5th Edition, pgs. 169 and 952 (copies enclosed) which defines the two terms. An "axis of symmetry" is:

An imaginary line about which a geometrical figure is symmetric. Also known as symmetry axis.

The term "horizontal" means:

Being in a plane perpendicular to the gravitational field, that is, perpendicular to a plumb line, at a given point on the earth's surface.

In claims 5 and 9, which have been amended to include the limitations of claims 6 and 10, respectively, the term "axis of symmetry" is used as defined above, i.e. to indicate that the axis about which the gripping pad is symmetric. The term "the horizontal" has been amended to be "a horizontal plane" to indicate a plane having horizontal properties, as defined above.

Claim 13 has been amended to recite that the thin layer of water is between the wafer and the window and the term "said water" now has antecedent basis.

Claim 13, which includes the limitations of now canceled claim 14, has been amended to state that the "plane" of the wafer is the plane defined by the circumference of the wafer.

Claim 15 has been amended to more clearly define the movement of the lower surface of the water bath.

CLAIM REJECTION - 35 USC § 103(a)

Claims 1-10 have been rejected under 35 USC § 103(a) as being unpatentable over Burke et al in view of Lustig et al. Claims 13-16 have been rejected under 35 USC § 103(a) as being unpatentable over Burke et al alone.

Burke et al. describe a wafer polishing tool which has a separate measuring station and means for moving the wafer and immersing the wafer into the measuring station. Burke et al. move a wafer from a polishing station to a measuring station which has an electrolyte bath. The measuring station performs electrical testing of the wafer through the electrolyte.

Burke et al. describe the immersion process as follows:

"Once the head is aligned with the electrode 29 it is lowered into the electrolyte 27."
(col. 4, lines 32-34)

Burke et al. apparently just push the horizontal wafer straight into the electrolyte. This can be seen from Fig. 2 which shows the pickup head 19 and the semiconductor wafer 21 in a horizontal direction. The connection of the pickup head 19 to the motor 17 is at right angles to the horizontal pickup head 19. Thus, the pickup head 19 would appear to move up and down only.

The present invention, however, immerses the semiconductor wafer in the water along an angle to the horizontal plane. This angled immersion smoothes the entry to the water and reduces the amount of bubbles produced on the semiconductor wafer. Claims 5 and 9 have been amended to recite that "an axis of symmetry of said gripping pad is at an angle to a horizontal plane" and claim 13 has been amended to recite the step of immersing such that "a plane defined by the circumference of said wafer is at an angle to a surface of said water".

The addition of Lustig et al. does not affect the above argument. Lustig et al. was cited to teach measuring a wafer through the use of an optical device. Lustig et al. do not show angled immersion of wafers nor an angled gripper.

Claims 5, 9 and 13 are, therefore, deemed to be allowable. Claim 15, which depends from claim 13 and adds additional subject matter thereto, is also deemed to be allowable.

Claims 1-16 are pending in the application. Claims 1-4, 6-8, 10, 14 and 16 have been canceled and claims 5, 9 and 13 have been amended to include the limitations of claims 6, 10 and 14, respectively.

In view of the above amendments and remarks, it is respectfully submitted that all remaining claims are patentable over the art of record and are now in condition for allowance.

Prompt notice of allowance is respectfully solicited.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231,

on October 2, 1997.


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Date of Signature

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